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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2675	20

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/508,567	PESACH, BENNY	
	Examiner	Art Unit	
	Leland R. Jorgensen	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 – 6, 10, 11, 15, 16, 18 – 21, 25, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen, UPSN 4,876,121.

Claim 1

Cohen teaches a device for displaying an image with an illusion of depth. Cohen, col. 1, lines 5 – 8. A first surface [upper surface 310] has a version of the image thereon. At least part of which version is modulated by a first pattern [grid pattern layer 100] of substantially transparent features of periodic nature having a substantially constant period. Cohen, col. 2, lines 60 – 64; col. 9, lines 25 – 62; col. 10, lines 20 – 33; and figures 7c & 8. A second surface has the version of the image thereon. A least part of which is modulated by a second pattern of features of periodic nature having a substantially constant period. Cohen, col. 2, lines 58 – 59; col. 10, lines 20 – 33; and figures 7c & 8. The first surface is intermediate an observer and said second surface. Cohen, figure 8. The period of said second pattern differs incrementally from the period of said first pattern. Cohen, col. 5, lines 40 – 52; and figures 1 & 8. Said period of at least part of at least one of said patterns has a variation. See e.g. Cohen, figure 13a. Said first and second surfaces are spaced apart by a distance [thickness t] larger than the period of either of said first and second patterns. Cohen, col. 10, lines 34 – 50; figures 7c & 8. Said incremental difference in the periods of the patterns, said spacing between tile first and second surfaces, and

said variation in the period are selected such that the interaction of said first and second patterns produces a Moire image exhibiting continuous three-dimensional visual effects. Cohen, col. 2, lines 5 – 8; col. 3, line 60 – col. 4, line 5; col. 4, line 27 – 58; and figures 1 – 6.

As to applicant's contention that the image includes a version of the image on the first surface and an version of the image on the second surface, Cohen teaches,

> It is offered that the moire pattern or effect is best defined as at least two superimposed figures, at least one having some sort of transparent, semi-transparent, or open regions, spatially separated or not, which interact so as to effect a different visual appearance, constituting the pattern, representing a visual illusion of both figures even though they have not physically changed. The figures may be of the same general shape, or vastly different; and they may have the same color or have different colors. The more varied the designs of the figures and/or the more varied the colors, the more complex will be the appearance or design of the moire pattern, though one could imagine that a highly complex pattern and/or color combination could result in sufficient cancellation of effects that the appearance of the moire pattern could end up looking quite simple. In the definition set forth in this paragraph, the term "illusion" deserves comment. In the context of moire patterns, the illusion is a reflection of what the mind's eye perceives from the interaction of the figures. The resulting pattern caused by such interaction appears to a viewer as having a design, shape, color, repetitiveness and/or complexity which is/are unlike the individual figures which make up the pattern. In addition, a moire pattern does not depend per se upon the incapacity of the eye to locate space between dots. It would, in the case of dots as the figures for generating the moire pattern, trade upon the interaction of two separate layers of dots in space to generate the pattern and the eye would depend upon the space about the dots to generate the interaction necessary for the illusion of a moire pattern.

Cohen, col. 4, lines 27 – 58. See also Cohen, col. 8, lines 14 – 17.

Thus, the image is the resultant pattern formed by versions of the image on the first and second surfaces, the two superimposed figures.

Claim 2

Cohen teaches that said features comprise a series of lines. Cohen, col. 5, lines 40 – 52; and figure 1.

Claim 3

Cohen shows that said features are shifted horizontally with respect to each other in different horizontal bands of said patterns, to produce images with varying vertical detail. Cohen, figure 1.

Claim 4

Cohen shows that said features are arranged in a substantially vertical direction, and said variation of the period of at least part of at least one of said patterns takes place in a substantially horizontal direction. Cohen, col. 1.

Claim 5

Cohen teaches that the views of said Moire image as seen by each of an observer's two eyes arc mutually displaced in such a way as to exhibit realistic three dimensional effects by means of the static parallax effect. Cohen, col. 10, line 51 – col. 11, line 10; and figure 8.

Claim 6

Cohen teaches that the appearance of said Moire image changes with change in the position of a viewer in such a way as to exhibit realistic three dimensional effects by means of the motion parallax effect. Cohen, col. 10, line 51 – col. 11, line 10; and figure 8.

Claim 10

It is inherent that the device of Cohen can be viewed by the observer's naked eye without the need for any special viewing aids such as special spectacles. See e.g. Cohen, figure 8.

Claim 11

Cohen teaches that said second surface is transparent. Cohen, col. 9, lines 52 – 53.

Claim 15

Cohen teaches that both of said surfaces are printed with patterns of the same color. Cohen, col. 4, lines 33 – 36.

Claim 16

Cohen teaches that both of said surfaces are printed with patterns of different color. Cohen, col. 4, lines 33 – 36.

Claim 18

Cohen teaches that said two surfaces are disposed on the opposite sides of a transparent plate [artificial nailbed 500]. Cohen, col. 9, lines 3 – 7; col. 10, lines 20 – 33; and figure 7c.

Claim 19

Cohen teaches that said first surface is disposed on one side of a transparent plate, and said second surface is a thin printed layer disposed close to the second side of said plate. Cohen, col. 10, lines 20 – 33; col. 13, lines 15 – 28; and figure 7c.

Claim 20

Cohen teaches that both first and second said surfaces are thin printed layers disposed on both sides of a plate. Cohen, col. 13, lines 15 – 28.

Claim 21

Cohen teaches that said first surface is disposed on one side of a transparent plate, said second surface is disposed on one side of another plate, said plates being disposed at a fixed distance from each other such that said surfaces are spaced from each other by a predetermined distance. Cohen, col. 10, lines 20 – 33; and figure 7c.

Claim 25

It is inherent that the device as taught by Cohen be illuminated from the front.

Claim 29

Cohen teaches a device for displaying an image with an illusion of depth. Cohen, col. 1, lines 5 – 8. Cohen teaches a first [upper surface 310] and second [bottom surface 310] surfaces with the first one of which is transparent. Each has at least part of its surface printed with a version of the image and wherein the version of the image on each surface is modulated by a predetermined pattern of substantially periodic features. Cohen, col. 2, lines 58 – 64; col. 9, lines 25 - 62, and figures 7c & 8. The surfaces are spaced apart by a distance considerably larger than the period of said features, Cohen, col. 10, lines 34 – 50; and figures 7c & 8. The spacing of said surfaces are varied in a predetermined manner such that the interaction of said two patterns produces a Moire image exhibiting continuous three dimensional visual effects when viewed from said first surface side of the device. Cohen, col. 2, lines 65 – 68; col. 3, line 60 – col. 4, line 5; and col. 4, lines 27 – 58. The image includes a version of the image on the first surface and an version of the image on the second surface. Cohen, col. 4, lines 27 – 58. See also Cohen, col. 8, lines 14 – 17.

Claim Rejections - 35 USC § 103

3. Claims 7 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Eaves, USPN 3,811,213.

Claim 7

Eaves teaches that the size of the feature changes with the apparent depth in such a way as to comply with the mind's perception that distant objects appear to have narrower details and close objects have wider details. Eaves, col. 2, lines 55 – 64; col. 13, line 57 – col. 14, line 37; col. 15, lines 46 - 54; and figure 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the extreme depth perception as taught by Eaves with the moiré display device as taught by Cohen to produce extreme depth perception. Eaves, col. 2, lines 55 – 65.

Claim 8

It is inherent that to the device described by Eaves that the size of the feature changes with the apparent depth in such a way as to comply with the geometric perspective effects that features on a tilted surface appear narrower than those on a flat surface by approximately the cosine of the tilt angle. See Eaves, col. 13, line 57 – col. 14, line 37; col. 15, lines 3 – 19.

Claim 9

Eaves teaches that the brightness of features of the moiré image changes with the apparent depth in such a way as to comply with any other desired lighting effect. Eaves, col. 2, lines 55 – 64; col. 13, line 57 – col. 14, line 37.

4. Claims 12, 13, 17, 24, 26, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of McGarvey, USPN 5,586,089.

Claim 12

Cohen does not specifically teach that the second surface is translucent.

McGarvey teaches a moiré device where the second surface is translucent. McGarvey, col. 7, lines 51 – 55.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a moiré device with a translucent surface as taught by McGarvey with the moiré image device as taught by Cohen. McGarvey invites such combination, teaching, "Somewhat translucent pigments will act as color filters when rear illuminated, creating an effect similar to that of stained glass." McGarvey, col. 7, lines 53 – 55. See also McGarvey, col. 4, lines 34 – 45.

Claim 13

McGarvey teaches that the second surface may be opaque. McGarvey, col. 7, lines 51 – 53.

Claim 17

McGarvey teaches a third background color. McGarvey, col. 7, lines 26 – 50.

Claim 24

McGarvey teaches that the device is illuminated from the rear. McGarvey, col. 8, lines 23 – 33.

Claim 26

McGarvey teaches an embodiment where the device is illuminated from at least one of its edges by ultraviolet light. McGarvey, col. 8, lines 34 – 36.

Claim 27

McGarvey teaches a moiré device that is constructed and operative for large area use. McGarvey, col. 1, lines 7 – 10; col. 3, lines 45 – 49.

Claim 30

McGarvey teaches a moiré device that is a billboard. McGarvey, col. 1, lines 7 – 10; col. 3, lines 45 – 49.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of McCurry, R. E., "Three-Dimensional Displays Utilizing Multiple Source Moire Patterns," IBM Technical Disclosure Bulletin, Apr. 1966, vol. 8, No. 11, pp. 1578-1579.

Claim 14

Cohen does not specifically teach that the spacing of said surfaces is between 5 and 100 times said pattern period,

McCurry shows in figure 1 that the spacing of the surfaces is about 5 times the pattern period.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the spacing as taught by McCurry with the moire display as taught by Cohen to further enhance the depth of the image. See McCurry, disclosure text, first sentence.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Roche et al., USPN 5,384,999.

Claim 22

Cohen does not teach a wire netting.

Roche teaches a wire mesh to form moiré patterns on a display. Roche, col. 1, lines 51 – 54; col. 3, lines 3 – 5; and col. 4, lines 13 – 16.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the wire mesh of Roche with the moiré display device of Cohen to make such display more sturdy and flexible. Roche invites such combination, teaching, "Furthermore, the wire mesh or other apertured material 14 can be contoured such that various moiré patterns may be formed on its surface, depending on the user's preference and the incident light." Roche, col. 4, lines 13 – 16.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCurry in view of Witkowski, USPN 5,525,383.

Claim 23

Witkowski teaches a moiré image that is on a flexible surface that can be rolled on a cylinder. Witkowski, col. 2, lines 33 – 47; col. 7, lines 42 – 53; and figure 12.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the flexible moiré surface of Witkowski with the moiré display device of Cohen. Witkowski invites such, teaching,

> Container displays that are now in use are limited in their ability to attract one's attention. It is therefore one important objective of the invention to provide a container that is particularly well suited for use as a beverage or product container which is able to display transitory moving images to attract the attention and interest of the user e.g., as a retail beverage container such as a standard beverage can for beer or soda pop as well as for use as a plastic beverage bottle such as a 12-ounce or 2-liter beverage bottle of the type sold at retail outlets and is also adaptable for use as a cup, mug or sports bottle for holding a beverage. In order to be acceptable, the container must be very inexpensive to produce, must have excellent attention-getting qualities, must be easy to use and must be durable enough to stay in good condition for a reasonable period of use.

Witkowski, col. 1, lines 14 – 28. Witkowski adds,

> One specific object of the invention is to provide a beverage or food container or vessel for displaying transitory or animated images through the use of a movable sleeve with a provision for reliably retaining the sleeve in place on the container, i.e., prevent it from accidentally falling off either before or during use.

Witkowski, col. 1, lines 44 – 49.

8. Claims 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Lass et al. USPN 4,894,110.

Claims 28 and 31

Cohen teaches that the device is constructed and operative for small area use.

Cohen does not teach the use of the moire effect in credit cards.

Lass teaches the use of the moire effect in a credit card. Lass, col. 2, lines 8 – 11.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the moire effect in a credit card as taught by Lass with the display device as taught by Cohen to increase the protection of credit cards against forgery.

Response to Arguments

9. Applicant's arguments with respect to claims 1 - 31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland R. Jorgensen whose telephone number is 703-305-2650. The examiner can normally be reached on Monday through Friday, 7:00 a.m. through 3:30 p.m..

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lrj

DENNIS-DOON CHOW
PRIMARY EXAMINER